

## II. REMARKS

Claims 1-32 are pending. The Applicants' attorney has amended claims 1, 5-9, 21, and 30-32. In light of the following, all of the claims as amended are now in condition for allowance, and, therefore, the Applicants' attorney requests the Examiner to withdraw all of the outstanding rejections.

### **Rejection of Claims 1-3, 5-9, 15-17, 19-25, and 30-32 Under 35 U.S.C. § 102(b)**

#### **As Being Anticipated By U.S. Patent 5,252,816 to Onimaru et al.**

As discussed below, the Applicants' attorney disagrees with this rejection.

#### **Claim 1**

Claim 1 as amended recites a beam-sweep mechanism that is operable to activate a beam-reflector assembly by exerting a first magnetic force and only the first magnetic force on the beam-reflector assembly.

For example, referring, *e.g.*, to FIGS. 22, 24, and 25A, a beam-reflector assembly 3040 includes a magnet 3048, and a beam-sweep mechanism 3042 activates the beam-reflector assembly 3040 (to rotate back and forth about a shaft 3050 and sweep a beam 3070) by repelling and only repelling the magnet 3048 with a magnet 3052.

In contrast, Onimaru does not disclose a beam-sweep mechanism that activates a beam-reflector assembly by exerting a first magnetic force and only the first magnetic force on the beam-reflector assembly. Referring, *e.g.*, to FIGS. 6A and 6B and col. 4, lines 30-55, Onimaru discloses a cam 2a that includes magnets 2b, which alternate their N and S poles facing outward from the cam. A mirror 6a includes two magnets 6d that have their N poles facing the cam 2a. As the cam 2a rotates, it causes the mirror 6a to rotate back and forth about an axis H-H by alternately attracting and repelling the magnets 6d with the magnets 2b. That is, unlike the claimed beam-sweep mechanism, which activates a beam-reflector assembly by exerting only one magnetic force, Onimaru's cam 2a activates the mirror 6a by exerting two magnetic forces (attracting and repelling).

#### **Claims 2-3, 5-9, and 30-32**

These claims are patentable by virtue of their dependencies on independent claim 1.

### **Claim 15**

Claim 15 recites a beam-reflector assembly having a first magnet and a beam-sweep mechanism having a second magnet configured for mechanical movement between a first position in which the second magnet attracts the first magnet and a second position in which the second magnet repels the first magnet.

For example, referring, e.g., to FIG. 25A, a beam-reflector assembly 3040 includes a magnet 3048, and a beam-sweep mechanism 3042 (FIG. 24) includes a magnet 3052, which can move between a home position in which it attracts the magnet 3048 and a sweep position in which it repels the magnet 3048.

In contrast, Onimaru does not disclose a beam-sweep mechanism having a magnet configured for mechanical movement between a first position in which it attracts a magnet of a beam-reflector assembly and a second position in which it repels the magnet of the beam-reflector assembly. Referring, e.g., to FIGS. 6A and 6B and col. 4, lines 30-55, Onimaru discloses a cam 2a that includes magnets 2b, and a mirror 6a that includes two magnets 6d facing the cam. Regardless of the position of the cam 2a, each of the magnets 2b can either attract or repel a magnet 6d, but cannot do both. For example, a magnet 2b having its N pole facing outward from the cam 2a can only repel the magnets 6d regardless of the rotational position of the cam. Likewise, a magnet 2b having its S pole facing outward from the cam 2a can only attract the magnets 6d regardless of the rotational position of the cam. That is, the cam 2a does not configure any magnet 2b for mechanical movement between a first position in which it attracts a magnet 6d and a second position in which it repels the magnet 6d.

### **Claims 16-17 and 19-20**

These claims are patentable by virtue of their dependencies on independent claim 15.

### **Claim 21**

Claim 21 as amended is patentable because, as discussed above in support of the patentability of claim 1, Onimaru does not disclose sweeping a beam across a target by

moving a magnet to exert a first magnetic force and only the first magnetic force on a beam reflector.

### **Claims 21-25**

These claims are patentable by virtue of their dependencies on independent claim 21.

### **Rejection of Claims 10 and 26 Under 35 U.S.C. § 102(b) As Being Anticipated By U.S. Patent 5,280,165 to Dvorkis et al.**

As discussed below, the Applicants' attorney disagrees with this rejection.

### **Claim 10**

Claim 10 recites a beam-reflector assembly having a mirror and a first magnet, and a beam-sweep mechanism having a second magnet. The sweep mechanism is operable to retain the mirror in a home position by attracting the first magnet with the second magnet.

For example, referring, e.g., to FIGS. 22 - 23, a beam-reflector assembly 3040 includes a mirror 3046 and a magnet 3048, and a beam-sweep mechanism 3042 includes a magnet 3052. The sweep mechanism 3042 retains the mirror 3046 in a home position (FIGS. 22, 25A) by attracting the magnet 3048 with the magnet 3052.

Conversely, Dvorkis does not disclose retaining a mirror in a home position by attracting a first magnet with a second magnet. Referring, e.g., to FIG. 2, col. 6, line 22 – col. 7, line 27, Dvorkis discloses a coil 58, which, when energized, forms an electromagnet.

When the coil 58 is not energized, a leaf spring 34 retains a mirror 52 in its rest (home) position (col. 6, line 65, col. 7, line 10). When the coil 58 is energized to either attract or repel the magnet 56, the leaf spring 34 deforms such that the mirror 52 rotates to sweep a beam from a laser 70. Consequently, when the coil 58 is energized to attract the magnet 56, it does not retain the mirror 52 in its rest position. To the contrary, energizing the coil 58 to attract the magnet 56 actually pulls the mirror 52 out of its rest position.

Consequently, Dvorkis does not disclose a beam-sweep mechanism having a magnet that retains the mirror 52 in its rest position by magnetic attraction.

#### **Claim 26**

Claim 26 is patentable for reasons similar to those recited above in support of the patentability of claim 10.

#### **Rejection of Claim 4 Under 35 U.S.C. § 103(a) As Being Unpatentable Over Onimaru in View of U.S. Patent 5,600,120 to Peng**

As discussed below, the Applicants' attorney disagrees with this rejection.

#### **Claim 4**

This claim is patentable by virtue of its dependency on independent claim 1.

#### **Rejection of Claim 11 Under 35 U.S.C. § 103(a) As Being Unpatentable Over Dvorkis in View of Peng**

As discussed below, the Applicants' attorney disagrees with this rejection.

#### **Claim 11**

This claim is patentable by virtue of its dependency on independent claim 10.

#### **Rejection of Claims 12–14 and 27-29 Under 35 U.S.C. § 103(a) As Being Unpatentable Over Dvorkis in View of U.S. Patent 5,206,492 to Shepard**

As discussed below, the Applicants' attorney disagrees with this rejection.

#### **Claims 12-14**

These claims are patentable by virtue of their dependencies on independent claim 10.

#### **Claims 27-29**

These claims are patentable by virtue of their dependencies on independent claim 26.

**Rejection of Claim 18 Under 35 U.S.C. § 103(a) As Being Unpatentable Over**

**Onimaru**

As discussed below, the Applicants' attorney disagrees with this rejection.

**Claim 18**

This claim is patentable by virtue of its dependency on independent claim 15.

**Conclusion**

In light of the foregoing, claims 2-4, 10-20, and 22-29 as previously pending and claims 1, 5-9, 21 and 30-32 as amended are in condition for full allowance, which is respectfully requested.

In the event additional fees are due as a result of this amendment, payment for those fees has been enclosed in the form of a check. Should further payment be required to cover such fees you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

DATED this 15<sup>th</sup> day of December, 2003.

Respectfully Submitted,



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